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The Economic Research Service in 1993



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See inside back cover for ERS organization list.

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United States Department of Agriculture
Economic Research Service
1301 New York Avenue NW.
Washington, DC 20005-4788

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Preface

This brochure describes the major activities planned by the Economic Research Service (ERS) for fiscal year 1993 (October 1992–September 1993). A companion to this brochure, *FY 1992 Publications and Data Products*, lists all publications, conference papers, and data products by ERS staff published in fiscal year 1992. Copies of the catalog and this brochure may be obtained from Room 1212, 1301 New York Avenue NW., Washington, DC 20005–4788 (202–219–0310). For information on how to order any of the monographs, periodicals, and data products published by ERS each year, request a free subscription to *Reports* by writing to ERS Publications, Room 208, 1301 New York Avenue NW., Washington, DC 20005–4788 (202–219–0515).

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The Economic Research Service in 1993

The mission of the Economic Research Service (ERS) is "to provide economic and other social science information and analysis for improving the performance of agriculture and rural America."

The U.S. Department of Agriculture (USDA) established ERS in 1961 principally under the authority of the Agricultural Marketing Act of 1946 (7 U.S.C. 1621-1627).

ERS produces economic and other social science information to serve the general public and to help Congress and the administration develop, administer, and evaluate agricultural and rural policies and programs. The wide range of topics covered by ERS includes:

- U.S. and world agricultural production and demand for production resources, agricultural commodities, and food and fiber products
- costs of and returns to agricultural production and marketing
- economic performance of U.S. agricultural production and marketing
- effects of government policies and programs on farmers, rural residents and communities, natural resources, and the public

Economic Research Service, planned resources, FY 1993

Division	Funds	Staff- years
	<i>Million dollars</i>	<i>Full-time equivalents</i>
Agriculture and Rural Economy	11.2	146
Agriculture and Trade Analysis	8.5	141
Commodity Economics	11.5	183
Resources and Technology	12.0	151
Other*	15.5	219
Total	58.7	840

*Includes ERS's Data Services Center, Office of the Administrator; unallocated resources; and indirect costs and parts of USDA's Economic Analysis Staff, Economics Management Staff, and Office of Energy.

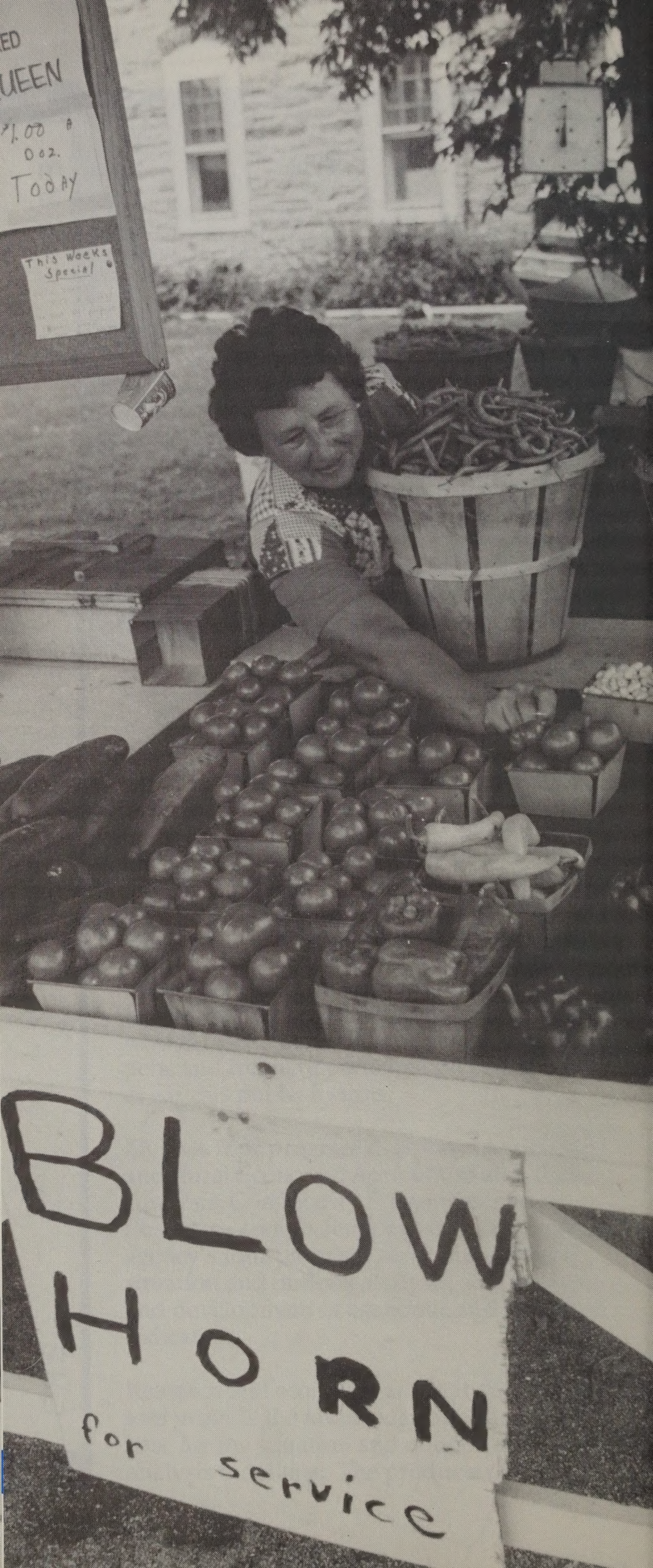
- organization and institutions of U.S. and world agricultural production and marketing systems, natural resources, and rural communities.

ERS-produced information is available to the public through research monographs, situation and outlook reports, standardized data products in electronic media, professional and trade journals (including *The Journal of Agricultural Economics Research*), magazines (including *Agricultural Outlook*, *Food Review*, *Rural Conditions and Trends*, and *Rural Development Perspectives*), radio, television, newspapers, and frequent participation of ERS staff at various public forums.

ERS has four program divisions (Agriculture and Rural Economy, Agriculture and Trade Analysis, Commodity Economics, and Resources and Technology) that carry out the agency's four principal functions: research, situation and outlook analysis, staff analysis, and development of economic and statistical indicators.

Research and economic and statistical indicators provide the knowledge and the data base for the situation and outlook and staff analysis functions. The products of the

situation and outlook analysis are periodic reports that analyze the current situation and forecast the short-term outlook for major agricultural commodities, agricultural exports, agricultural finance, agricultural resources, and world agriculture. Staff analysis entails assessments of issues requiring policy decisions by the administration and Congress.



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Agriculture and Rural Economy Division

The Agriculture and Rural Economy Division (ARED) conducts research on national and regional conditions and trends in agriculture and in rural areas.

The division conducts a national program of research and analysis related to agricultural and rural conditions and trends and identifies and evaluates public and private sector actions and policies that affect the agricultural sector and rural areas. ARED's agenda is shaped by the changing economic and demographic structures of agriculture and rural America. Its program covers the industrial transformation of the rural economy, interconnections between agriculture and the rural and national economies, and comparisons of performance between urban and rural economies.

The division also studies the financial performance of the farm sector and its components, effects of international economic and financial integration on the rural economy, migration and population change, changes in rural and agricultural labor markets and labor conditions, and the implications of the evolving structures of farming, credit, and finance for rural people, businesses, and communities.

In 1993, as part of its research to better understand the agricultural sector and its relationship to the national and regional economies, ARED will publish the annual "Status of the Family Farm" report using, for the first time,

data from the Farm Costs and Returns Survey that will provide an annual farm-based profile of the sector and provide projections of the future of the U.S. farm sector into the next decade. Using the Farm Costs and Returns Survey, ARED will analyze the financial performance and viability of farm businesses both from an enterprise and from a whole-farm perspective, and the relationship of the economic performance and well-being of the farm operator household to the operator's farm business and the rural area in which the farm is located. The division will use the newly released Department of Commerce 1982 national input/output table to update widely used estimates of the components of the food and fiber system and the effects of agricultural exports on the U.S. economy.

ARED will incorporate disaggregated household data into the input/output and computable general equilibrium models to permit analysis of the distribution among households of the effects of policy changes. ARED will also study the relationship of national interest rates and employment to the agricultural and rural economies to improve the public's understanding of the relationship of both the sector and the broader rural economy to the national economy. The division will analyze the effects of changes in farm production on several prototypical farming areas, emphasizing the interrelationship between farming and farm-related sectors and the overall economy. ARED's analysis will improve public understanding of the evolution of the rural economy, the process of local economic development, and the potential of government strategies to improve the well-being of rural people and communities.

In 1993, the division will:

- publish a monograph based on the 1990 census providing an updated profile of rural America with particular emphasis on the ways in which changes in rural families, jobs, and income over the past decade varied, according to regional location, remoteness

from major urban centers, and the nature of local economies

- examine the skills of the rural workforce and the demand for those skills in local labor markets, particularly in manufacturing
- study the potential of rural manufacturing to adapt to increasingly competitive global markets
- study the extent to which structural adjustments in response to markets and regulatory developments affect the profitability of rural financial institutions and, in turn, the flow of credit to rural farm and nonfarm businesses
- assess the effectiveness of diverse rural development strategies under varying local conditions in order to assist USDA's Rural Development Administration and State Rural Development Councils in many States.

ARED has five branches: Farm and Rural Economy, Farm Sector Financial Analysis, Finance and Development Policy, Human Resources and Industry, and National Economy and History.

The Farm and Rural Economy Branch conducts a program of research, current intelligence, and staff analysis on the changing structure of the farm sector, farm labor markets, and the economic ties between farming and other sectors of local communities and regions. Farm structure research includes consolidating and assessing: current information on farm numbers and size distributions, ownership and control of resources and factors of production, and the organization of farm production (including the agricultural workforce); and projecting the future structure of agriculture under alternative economic conditions and policy scenarios.

Research on community ties emphasizes the connection between the farm sector and farm-related businesses in farm-based communities and regions of the United States. Special emphasis is placed on assessing the vulnerability of rural economies to major adjust-

ments in the structure of agriculture and in agricultural policies.

In 1993, the branch will prepare the annual report to Congress on the status of the family farm using, for the first time, time series data based on information from the annual Farm Costs and Returns Survey to describe the major structural features of the farm sector. The branch will also report the basic demographic characteristics and annual average earnings of hired farmworkers, analyze the structure of the U.S. farm sector into the next decade, and analyze the effects of major changes in farm production on the economies of several prototypical farming areas to provide a better understanding of the interrelationship between farming and farm-related sectors and the overall local economy.

The Farm Sector Financial Analysis Branch develops statistics and carries out analyses that provide a broad perspective on the financial performance and economic well-being of the U.S. farm sector, of the variety of types of farm businesses comprising the sector, and of farm operator households. A major focus of the branch's work is preparing estimates and forecasts of USDA's financial statistics for farm businesses (enterprise and firm costs and returns, net income, assets, liabilities, and net worth) and the income and wealth position of farm operator households. To obtain primary data on the financial transactions, structural characteristics, and socioeconomic attributes of farms and farm households, the branch, along with USDA's National Agricultural Statistics Service, designs and participates in the Farm Costs and Returns Survey.

The branch examines how changes in the economy and agricultural and other public policies may affect the financial position and well-being of farm businesses by enterprise type, economic size, and geographic location. The branch studies linkages among farm businesses and other firms and individuals who provide production inputs to determine how farm income and wealth are distributed. Analyses of relationships between farm businesses and farm operator households are con-

ducted to measure the importance of farming to farm families as a source of income and employment and to assess how farm families allocate human, financial, and other capital between farming and other activities.

In 1993, the branch will provide estimates and forecasts of indicators of the financial performance of farm businesses, farm operator households, and the aggregate farm sector. The Farm Costs and Returns Survey will be designed and implemented with a special emphasis on collecting data related to the economic characteristics, decisionmaking, and financial well-being of farm operator households. Emphasis will be placed on collecting data needed to analyze the financial performance of dairy farms and to derive the distribution of costs of milk production by size and other characteristics of dairy farms.

The branch plans research and analysis focused on three areas. First, research aimed at improving the accuracy of the measurement of indicators of financial performance will include assessing the procedures used to measure capital replacement in the farm sector income accounts and analyzing farm and off-farm work experiences to measure the opportunity costs of farmers' time.

The second area of research will focus on the economic performance and well-being of farm operator households and on the relationship of farm operator households to the farm businesses the operators manage and the rural areas in which the farms are located. This research will also seek to explain the income inequality of operator households, as well as to identify factors that explain the off-farm labor supply of farm operators, returns to education of farmers, and differences in the consumption patterns of farm operator families. The third major research area centers on gaining a better understanding of the factors influencing the financial performance and viability of farm businesses, both from an enterprise and from a whole-farm perspective. This work will include using multivariate analysis to assess factors that influence how much individual producers spend on production inputs.

The Finance and Development Policy Branch analyzes the consequences of financial markets, Federal tax, and rural economic policy developments on the agricultural sector and rural economies, and it evaluates current and alternative Federal agricultural credit assistance programs, innovations in agricultural lending practices, and the structure and performance of financial institutions serving the agricultural sector. The branch also assesses the effectiveness of Federal, State, and local rural development programs and strategies, examines the structure and performance of financial markets serving nonfarm rural businesses, households, and governments, and assesses the importance of changes in Federal tax policy for income distribution, capital formation, and resource allocation within the farm and rural economies.

In 1993, the branch will undertake a series of analyses concerning the structure of the rural financial system, the effectiveness of rural development policies, and the effect Federal credit policies have on rural competitiveness. The savings and loan and banking industries, together with the Farm Credit System, are undergoing significant structural adjustments in response to market and regulatory developments. As the structure of the rural financial system changes, the cost and availability of financial services to businesses located in rural America could change. During the year, the branch will complete research on the extent to which these structural adjustments affect the profitability of rural financial institutions and, in turn, the flow of credit to rural farm and nonfarm businesses.

The branch will also initiate a study of Federal credit programs for farmers and nonfarm rural businesses. With continuing pressure on budgets, Federal credit programs are increasingly relying on private financial institutions to meet program objectives. In 1993, research on the effectiveness of Federal loan guarantee programs will continue and work will be initiated on use of federally financed revolving loan funds to channel

financing to new businesses in rural communities.

With regard to broader rural development issues, the creation of USDA's Rural Development Administration (RDA) and the formation of State Rural Development Councils have increased the need for indepth information on the effectiveness of diverse rural development strategies. In consultation with RDA and other interested parties, the branch plans to assess what is known about the usefulness of various rural development tools under varying local conditions. This assessment will be used to target ERS and RDA-funded research on rural development strategies. The branch will also manage an interagency agreement between RDA and ERS in support of the State Rural Development Councils.

The Human Resources and Industry Branch analyzes and reports on rural development conditions and trends and provides information for rural programs and policies. Major areas of work include rural industrial structure and performance, workforce assets and opportunities, demographic change, and income trends. Motivated by declining rural earnings and outmigration in the past decade, the branch's research focuses on the future competitiveness of rural people and places, in the context of increasingly global markets and the Nation's changing economic structure.

In 1993, branch research will center on three issues: workforce skill preparation, rural manufacturing, and the geography of rural change. The importance of education and training for individual job opportunities has increased considerably in the past 15 years. New data will examine the effectiveness of rural schools, the education and migration history of young adults who grew up in rural areas, and any changes in the training offered by rural employers over the past decade. Investigation of skills demanded in the rural and urban labor markets will be expanded to incorporate shifts in the skill content of jobs. Manufacturing remains a major part of the rural economic base, employing twice as

many people as agriculture and mining combined.

Research on the effect of expanded international trade, industrial reorganization, redirected government spending, and other changes on rural manufacturing will be published in a monograph. The 1980's was a difficult period for rural people and places in general. New work on the geography of rural change, to be reported in a special issue of *Rural Conditions and Trends*, will draw on the recently released 1990 census to examine how changes in rural families, jobs, and income over the decade varied by region, remoteness from major urban centers, and the nature of the local economy. Branch staff will also examine the importance of such factors as natural amenities, workforce education, and labor market size for local economic growth. Reports on rural minorities and the health status of rural residents, particularly the elderly, will also be published.

The National Economy and History Branch analyzes current agricultural and rural issues from the view of the U.S. and world economies and provides a historical perspective on the forces shaping those economies. Areas of analysis include the effects of monetary and fiscal policies on agriculture and rural areas, the macroeconomic effects of developments on the farm and rural economies, and the general economic outlook. The branch studies the linkages among sectors of the rural economy and between rural sectors and the general economy, evaluates the economic performance of the food and fiber system relative to other sectors, and maintains the agricultural portion of the national input-output (I/O) accounts.

The branch also maintains data and provides analyses of the history of agricultural policies and programs and studies the history of USDA, as well as the history of economic change and its effects on agriculture and rural life. In 1993, the branch will provide macroeconomic situation and outlook, research, staff analyses, and historical support, and broaden models and information for situation and outlook work and staff

analyses; study the relationship of national interest rates and employment to the agricultural and rural economies; and improve analysis of energy supply and demand and preliminary investigations of income distribution and the macroeconomy.

The branch will also update models for analyzing linkages among economic sectors by incorporating the 1982 U.S. input/output tables, released in 1992 by the U.S. Department of Commerce, and will revise estimates of the components of the food and fiber system and of the effects of agricultural exports. The branch will incorporate disaggregated household data into the I/O and computable general equilibrium (CGE) models to permit analysis of the household distribution of the effects of alternative policies. For example, using the household data within a CGE model, staff will analyze the probable transfer of resources and purchasing power that would result from a food subsidy program, while holding the macroeconomic effects constant.

Other branch goals for 1993 are to explore alternatives for working more effectively with other ERS divisions, especially in the situation and outlook area. A first step will be to study whether using a larger-scale, commercial macroeconomic model as an additional tool for developing estimates would improve the ability to coordinate work with ERS's Agriculture and Trade Analysis Division, as well as to expand outlook capacity.

The branch also plans to complete a historical perspective on the evolution of agriculture and rural America and policies and associated programs, to publish a history of rural development policies, to begin a history of American food relief overseas and a new edition of the history of farm price support and production adjustment policies, and to record the experiences of major figures who participated in the formulation and implementation of past policies and programs of interest to USDA.



Agriculture and Trade Analysis Division

The Agriculture and Trade Analysis Division (ATAD) is a major source of expertise, data, models, and research information about the agricultural economies and policies of foreign countries and the agricultural trade and development relationships between foreign countries and the United States.

Topics covered in ATAD include agricultural and trade policies and their relationship to the economic, technical, and political factors affecting agricultural trade among countries; economic and agricultural market structure, efficiency, and production systems of foreign countries; technical production systems of foreign countries; and foreign governments' production, consumption, macroeconomic, and trade policies. The major mission of ATAD is to provide analyses of the global and regional trade implications of the changing agricultural, technological, economic, and policy environments.

In 1993, ATAD will examine the trade implications of environmental policies and food safety regulations in other countries, continue to develop and analyze a global baseline projection system for world agriculture, and analyze and update measures of support for agriculture in key countries. ATAD will also evaluate potential preferential trade agreements among countries in the Western Hemisphere, Europe, and Asia, examine the economic implications of political restructur-

ing in Central and Eastern Europe, the former Soviet Union, and some developing countries, and assess food aid needs of foreign countries.

ATAD has six branches: Africa and Middle East, Asia and Pacific Rim, Europe, Markets and Competition, Trade and Development Analysis, and Western Hemisphere.

The **Africa and Middle East Branch** provides analysis and research on the economic determinants affecting the short- and long-term capacities of African and Middle Eastern countries to improve their economic well-being and to provide food required by a rapidly growing population. The branch examines how macroeconomic and agricultural policies and programs (including producer taxes and consumer subsidies), the quality and quantity of natural resources, technological and environmental constraints, the political environment, and exporters' trade promotion and aid programs affect commercial and concessional agricultural trade in the region.

In 1993, the branch will:

- analyze the factors driving the rapid growth of agricultural imports in the Middle East and North Africa and affecting U.S. competitiveness in the region
- expand its multi-commodity analytical frameworks in order to better project the effects of alternative economic policies and macroeconomic developments on agricultural production and consumption in key countries
- determine the food aid needs of African countries by analyzing their requirements, their domestic production, and their commercial import capacity
- examine the key linkages between productivity and agricultural resource use in sub-Saharan Africa and how these will affect the long-term food import needs and the environment of the region.

The Asia and Pacific Rim Branch conducts research, analysis, and outlook reporting on key issues affecting the agricultural performance, policy, and trade for the Asia and Pacific Rim region (South Asia, Southeast Asia, China, East Asia, and Oceania) for government policymakers, private sector decisionmakers, the research community, and the general public.

In 1993, the branch will:

- forecast prospects for agriculture and trade levels in the Asia and Pacific Rim region
- assess the implications of agricultural policy reform in China
- evaluate food aid needs in South and Southeast Asia
- expand expertise on the environmental constraints to Asian agriculture
- assess the importance of grain quality in importers' decisionmaking
- begin development of an analytical capacity for Indochina by initiating contacts with that region.

The branch will also update producer subsidy equivalent/consumer subsidy equivalent calculations through 1991 for Japan, China, Australia, New Zealand, South Korea, Taiwan, and selected South and Southeast Asian countries. Staff analyses will focus on issues associated with evaluating a GATT agreement from the perspective of the region, particularly Japan, South Korea, China, and members of the Cairns group (14 small nations that have allied themselves as part of the GATT negotiations as nonsubsidizing agricultural exporters). The supply and demand work in the branch will build on the ongoing ERS baseline project. Models will be updated for all the developed markets and work will be undertaken to adapt the China model to the ATAD framework and update and develop models for South and Southeast Asia. The branch will provide direct support for division initiatives on the

environment and trade, trade agreements, and analytical framework areas. The branch will report market and policy developments of the region in scheduled situation and outlook reports, formal briefings, informal public contacts, an informal newsletter, and in the branch's annual *Asia, Pacific Rim, and China Agriculture and Trade Reports*.

The **Europe Branch** conducts research, analysis, and outlook reporting on key issues affecting the agricultural performance, policies, and trade of the European Community (EC) and other countries of Western Europe, Central and Eastern Europe, and the former Soviet Union for government policymakers, private sector decisionmakers, the research community, and the public.

In 1993, the branch will develop and update data bases, analyze supply and demand for major commodities, and monitor agricultural, trade, and policy developments in the regions. Market and policy developments will be reported in scheduled situation and outlook reports, formal briefings, informal public contacts, and in the branch's annual *Western Europe and Former Soviet Union Agriculture and Trade Reports*. The branch plans to continue a staff analysis role in the outcome of GATT negotiations, reform of the EC's Common Agricultural Policy, and other trade issues, and to continue development of analytical tools for policy analysis and baseline projections for the regions. The branch will conduct studies related to division initiatives on the environment, grain quality, the restructuring of Eastern Europe and the former Soviet Union, comparative advantage and changing trade patterns, and the expansion of trading blocs in Europe and the former Soviet Union. The branch will also provide essential country-specific expertise to ERS and other teams providing technical assistance to Eastern and Central Europe and the former U.S.S.R. republics.

The **Markets and Competition Branch** provides an integrated view of the world economy and how it relates to U.S. agriculture. The branch conducts research and analysis on the economic and market factors

underlying emerging patterns of global agricultural trade. Major research activities include: analyzing the effects of macroeconomic conditions and policies on world agriculture; analyzing the longrun effects of technology, changes in productivity, and changes in the structure of demand on global trade patterns; and developing a long-term policy framework for major regions and countries of the world.

In 1993, the branch will continue to develop and use the longrun policy framework, coordinate the international baseline, support the development of a new or enhanced set of country models, improve and refine the methods linking country models in order to clear world markets, and develop and refine data and information for longrun policy analysis, including price and macroeconomic data. The branch will also develop longrun macroeconomic forecasts for major countries and analyze technological and resource factors that affect longrun outlook and demand, consumption, and trade issues.

The Trade and Development Analysis Branch provides an integrated view of international agricultural issues, particularly as they affect the United States. The branch conducts research and staff analyses on economic aspects of trade, economic development, and environmental policy.

In 1993, the branch will continue its analysis of the potential outcomes of the GATT and regional trading bloc developments. Research will focus on the implications for world and U.S. agricultural trade of:

- the North American Free Trade Agreement (NAFTA)
- the U.S. Enterprise for the Americas Initiative (EAI)
- the potential creation of a European Economic Area involving the EC and European Free Trade Association (EFTA) countries
- a potential free trade area with Pacific Rim countries.

Division and Branch

Agriculture and Rural Economy Division

Farm and Rural Economy Branch
 Farm Sector Financial Analysis Branch
 Finance and Development Policy Branch
 Human Resources and Industry Branch
 National Economy and History Branch
 Office of the Division Director

Total

Agriculture and Trade Analysis Division

Africa and Middle East Branch
 Asia and Pacific Rim Branch
 Europe Branch
 Markets and Competition Branch
 Trade and Development Analysis Branch
 Western Hemisphere Branch
 Office of the Division Director

Total

Commodity Economics Division

Situation and Outlook
 Coordination Staff
 Commodity and Trade Analysis Branch
 Crops Branch
 Food Economics Branch
 Livestock, Dairy, and Poultry Branch
 Marketing Economics Branch
 Specialty Agriculture Branch
 Office of the Division Director

Total

Resources and Technology Division

Environmental and Health Risk Branch
 Land and Global Resources Branch
 Productivity and Emerging Technologies Branch
 Resource Policy Branch
 Water Branch
 Office of the Division Director

Total

Resources

21

ERS

Funds

Staff-years

*Million
dollars*

*Full-time
equivalents*

1.1

19

4.5

38

1.4

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The branch also will expand analysis on the linkages between environmental policies and agricultural trade with specific activities focusing on:

- environmental consequences of policy reform in the EC
- effects of trade and environmental policy coordination in Western Hemisphere countries
- inventory and analysis of the extent that current and evolving environmental legislation in major importing and exporting countries can affect agricultural trade
- updating and extending the ability to model the interdependencies between environmental legislation and agricultural trade.

The **Western Hemisphere Branch** conducts research, analysis, and outlook reporting on key economic and policy issues, such as the North American Free Trade Agreement (NAFTA), affecting the agricultural sectors of the United States, Canada, and Latin American countries and regional trading blocs. Branch research focuses on factors that affect prices, supply, demand, trade, and policy relationships within the countries and regions and their linkages to the United States and U.S. agriculture. Country and regional issues are identified and evaluated. Branch research activities include: the region's competitiveness; trade barriers; regional, country, commodity, and trade modeling; food safety; regional investment and infrastructure; and regional productivity, environment, and natural resource use.

The branch coordinates U.S. support of the activities of international organizations such as the Organization for Economic Cooperation and Development, Food and Agriculture Organization of the United Nations, and the GATT. Branch outlook activities include producing regional reports, monitoring of U.S. legislative developments, monitoring developments in the region, coordinating division-controlled correspondence, contributing to ATAD projections, and evaluating the effects

of foreign country policies and developments on U.S. agriculture.

The anticipated 1995 farm legislation and trade agreements in the Western Hemisphere are expected to direct the branch's work in 1993. The branch will prepare staff analyses on planting flexibility, market stability, effects of the GATT, and international developments. Trade analyses within the Western Hemisphere include the NAFTA and the U.S. Enterprise for the Americas Initiative. Environmental, sanitary, and phytosanitary standards and regulations, including health and safety regulations, are issues in multilateral negotiations and regional negotiations in the Western Hemisphere. The branch monitoring and research activities provide critical information to decisionmakers via research reports and articles, situation and outlook analyses, and unpublished staff analyses on economic and policy issues and conditions.



Commodity Economics Division

The Commodity Economics Division's (CED) program of analysis is designed to improve public and private sector understanding of U.S. and world markets for agricultural products.

Analyses focus on three major areas: commodity supply, demand, and price monitoring and forecasting; structure, conduct, and performance of the major national and international commodity markets; and national and international commodity marketing from the U.S. producer through domestic and foreign consumers and from the foreign producer of imported products to the U.S. consumer.

In 1993, CED will analyze commodity developments and publish results in regular outlook reports, special reports as market developments warrant, yearbooks, presentations, and responses to public information requests. CED will continue its analyses in the following areas: structure, operation, and performance of the major commodity markets in alternative policy settings; investment and competition in the food marketing industries in the United States and abroad; and food safety, food assistance, and nutrition education.

Special projects include congressionally mandated studies of commodity policy and program issues; and development and maintenance of data bases and models to improve analyses, forecasts, and projections. CED will continue to provide analytic support for

trade negotiations and agreements and technical assistance in the development of situation and outlook programs for Eastern Europe and Taiwan.

CED has a Situation and Outlook Coordination Staff and six branches: Commodity and Trade Analysis; Crops; Food Economics; Livestock, Dairy, and Poultry; Marketing Economics; and Specialty Agriculture.

The Situation and Outlook Coordination Staff coordinates situation and outlook activities across the agency, ERS participation in USDA outlook activities, and clearance of all ERS outlook reports through USDA's World Agricultural Outlook Board. The staff also prepares *Agricultural Outlook* and *Food Review*, and coordinates and prepares ERS long-term situation and outlook forecasts and technical assistance, as well as outlook briefing materials for USDA's Office of the Assistant Secretary for Economics.

In 1993, the staff will publish 11 issues of *Agricultural Outlook* and 4 issues of *Food Review*. The staff will coordinate weekly outlook briefings for ERS staff and bimonthly briefings for the Assistant Secretary for Economics, participate in agricultural outlook conferences and ongoing analysis projects, and monitor and review ERS outlook reports. Other plans include coordinating the ERS long-term situation and outlook forecasts and technical assistance activities.

The Commodity and Trade Analysis Branch collects, analyzes, and publishes information on U.S. and international trade in program crops, monitors and analyzes developments in U.S. and foreign food aid and export promotion programs, and conducts applied research and staff analyses on the factors affecting global agriculture and the demand for U.S. exports and imports. The branch also provides data and analytical support to ERS for forecasting and analysis, and serves as the primary focal point for interaction between ERS and other USDA agencies on world trade in major crops and trade policy issues.

In 1993, the branch will:

- assess the implications of the outcome of GATT negotiations on U.S. export programs and on long-term prospects for world commodity markets
- evaluate the seasonality of agricultural trade of the United States and of major competitors and markets in order to improve the accuracy of export forecasts
- develop an enhanced agricultural price data base and a data base for credit guarantee and food aid programs
- organize, coordinate, and reconcile ERS international baseline forecasts
- examine available models and other analytical frameworks for adaptation to analysis of global commodity trade and price issues
- conduct studies of foreign market development programs and U.S. export programs.

The branch will publish 12 issues of the *U.S. Agricultural Trade Update* newsletter, 10 *Foreign Agricultural Trade of the United States* reports, and 4 *Outlook for U.S. Agricultural Exports* reports, and will contribute analyses and articles to *Agricultural Outlook*, *World Agricultural Supply and Demand Estimates*, *Global Food Assessment: Situation and Outlook Report*, commodity situation and outlook reports, and various food and agriculture service publications.

The **Crops Branch** conducts research, staff analyses, policy and program evaluations, and situation and outlook analyses on the major field crops produced in the United States. The branch program involves analyzing production, marketing, distribution, trade, and use of the individual commodities and their products as well as cross-commodity relationships among the crop subsectors.

In 1993, the branch will monitor and analyze supply, demand, and price developments affecting the major field crops and publish

current information in 19 situation and outlook reports and yearbooks covering the cotton and wool, feed, oil crops, rice, and wheat industries. Information will also be published periodically in ERS's *Agricultural Outlook* (11 issues), *Food Review* (quarterly), and in the *World Agricultural Supply and Demand Estimates* (monthly).

The branch will also:

- participate in interagency commodity estimates committees for cotton, wool and mohair, oilseeds, feed grains, wheat, and rice
- conduct policy and program evaluations for major field crops to support the Food, Agriculture, Conservation, and Trade Act of 1990 and prepare for the 1995 farm legislation
- analyze the effects of alternative proposals for trade agreements as they relate to specific crop subsectors
- monitor the transportation and storage situation for crops
- develop crop data bases to support situation and outlook analysis and applied research for major field crops.

The branch will analyze the structure, conduct, and performance of the crop sectors, and the costs and benefits of cleaning grain, and will prepare staff analyses on policy and program issues related to crop commodities.

The branch will publish results of cotton ginning costs and cotton distribution patterns and milled rice distribution patterns in the United States, and will provide technical assistance in the development of situation and outlook programs covering selected crop commodities in Taiwan and Eastern Europe.

The **Food Economics Branch** conducts research, current intelligence, and staff analysis on issues related to U.S. food demand, food policy (including food assistance, nutritional programs, and consumer informa-

tion requirements), and programs for the protection, safety, standards, labeling, and wholesomeness of the Nation's food supply. The branch works closely with other government agencies, including the Food and Drug Administration, and the Environmental Protection Agency, as well as with USDA's Agricultural Marketing Service, Animal and Plant Health Inspection Service, Extension Service, Food and Nutrition Service, Food Safety and Inspection Service, and Human Nutrition Information Service.

In 1993, the branch will research:

- factors influencing demand for food consumption away from home
- how household demographic effects on food choices have changed over time
- how an individual's life cycle affects food demand
- how food assistance delivery methods affect food expenditures
- the effects of outreach programs on food stamp program participation
- the effects of diet and health concerns on food spending and fat intake.

The branch will also research the costs of foodborne microbial illness, develop survey instruments to estimate willingness to pay for food safety, and assess economic incentives for firms to reduce food safety hazards.

The branch will publish statistics on food consumption, prices, and expenditures; consumer food expenditures by food type, based on Bureau of Labor Statistics survey data; and trends in purchases of food consumed away from home. The branch will continue to coordinate USDA's dairy promotion evaluation program and conduct research on dairy advertising effectiveness, coordinate evaluation of the interagency nutrition education program, contribute to critical objectives of the Federal Government's Ten Year Plan for Nutrition Monitoring and Related Research,

and contribute to USDA's and ERS's food safety task forces, including the provision of analytical support for food safety regulatory programs.

The Livestock, Dairy, and Poultry Branch conducts research, staff analysis, policy and program evaluations, situation and outlook analysis, and statistical analysis on all major livestock (beef, sheep, pork, dairy, and poultry) produced in the United States and in other countries. The branch's program encompasses economic analysis of food safety and environmental effects, production, marketing, distribution, trade, and use of individual commodities as well as cross-commodity relationships within animal agriculture and between animal agriculture and other commodities, the agricultural sector in general, and the macroeconomy.

In 1993, the branch will analyze developments and publish current information and forecasts on the U.S. and world markets for the livestock subsectors in 6 *Livestock and Poultry Situation and Outlook Reports*, 4 *Dairy Situation and Outlook Reports*, and 12 *Livestock and Poultry Updates*. The branch plans to contribute to other USDA periodicals, including *Agricultural Outlook* (11 issues), *FoodReview* (quarterly), and *World Agricultural Supply and Demand Estimates* (monthly).

The branch will also:

- participate in the interagency commodity estimates committees for red meats, poultry, and dairy
- conduct special policy and program evaluations for livestock and dairy mandated by the Food, Agriculture, Conservation, and Trade Act of 1990 and other legislation or proposed regulations, including the anticipated 1995 agricultural legislation
- conduct staff analysis of policy and program issues for congressional staff and USDA decisionmakers, including mandated studies

- develop and improve the branch data base, electronic generation and updating of situation and outlook tables and similar output, and reporting of livestock and meat statistics
- continue cooperative support for the Western Livestock Marketing Information Project, which provides livestock price information
- analyze the effects of trade agreements on the livestock and dairy industries.

Other branch goals include plans to:

(1) refine supply, demand, and price forecasting methods and models to support outlook, staff analyses, and research; (2) collect and analyze data on dairy, beef, sheep, and hog cost-of-production budgets by size of farm and region and by degree of enterprise specialization using the Farm Costs and Returns Survey; (3) analyze structural change and adjustments in livestock and dairy production, processing, and marketing, using data from the latest census of agriculture and industry sources; (4) analyze and report factors affecting price relationships, margins, and spreads between the retail and farm levels for dairy and major meats, including a review of methods used; (5) analyze the effect of selected microbiological food safety issues in terms of costs and benefits of reducing microbacteriological contamination from alternative control strategies; (6) assess the effect of environmental pollution and the costs/benefits of alternative control strategies to reduce such environmental damage; and (7) provide selected assessments of the demand for livestock and dairy products.

The **Marketing Economics Branch** is responsible for data collection, research, situation and outlook analyses, and staff analysis on the food and fiber marketing system from producer to consumer, both domestic and international. These activities include monitoring, analyzing, and forecasting costs and farm-to-retail price spreads for major commodity markets; providing analyses and forecasts of changes in retail food prices and food consumption trends; collecting primary and secondary information on and analyzing the factors affecting the structure, behavior, and

performance of the food and fiber marketing system; and evaluating the performance and effect of commodity marketing and pricing institutions. In 1993, the branch will contribute to ERS outlook information objectives by publishing statistics on and analyses of food marketing, food consumption, food prices, food marketing costs, and consumer expenditures for food in regularly scheduled situation and outlook reports and in periodicals such as *Agricultural Outlook*, *Food Review*, *Food Marketing Review*, and *Food Cost Review*.

The branch will also develop models, analyses, and reports on major factors that influence price spreads and margins for domestic food commodities both at home and away from home; analyze chemical-use practices and their relationship to marketing and distribution practices, and linkages between market practices and chemical uses by growers; identify and evaluate structural and performance changes in food processing; analyze structural changes taking place in Canadian and U.S. food industries and changes in investment and merger activities of the food marketing system; and analyze contracting and vertical integration in farming, use of cash, futures, and options contracts in farming, Federal grades and chemical-use issues, and effects of trader reputation on market exchange.

The Specialty Agriculture Branch analyzes the supply, demand, pricing, marketing, processing, and trade of specialty agriculture commodities, including fruits, vegetables, sweeteners, tobacco, tree nuts, aquaculture, industrial crops, floriculture/horticulture products, and tropical beverages (coffee, tea, and cocoa). Primary emphasis is on providing information on the economic, regulatory, technological, trade, and public policy and program issues in domestic and international contexts. Research initiatives are planned to support ERS's analysis of issues related to food safety, trade liberalization, and sustainable agriculture.

In 1993, the branch will provide supply, demand, and price outlook information in situation and outlook reports and yearbooks

covering fruit and tree nuts, vegetables and specialty crops, tobacco, sugar and sweeteners, and aquaculture. The branch will contribute to periodicals such as *Agricultural Outlook*, *Agricultural Statistics*, and *FoodReview*.

The branch will research postharvest use of chemicals on grapefruit; adoption of integrated pest management in the vegetable processing industry; financial characteristics of flue-cured tobacco farms; structure of the sugar industry in Japan, China, Thailand, and Eastern Europe; production possibilities in the United States for milkweed and kenaf; and commercializing new industrial uses.

The branch will also analyze the economics of sustainable agriculture, the use of Mexican labor in the fruit and vegetable industry, beet molasses desugaring technology, and competition for selected specialty commodities under trade liberalization.

Other branch plans for 1993 are to analyze policy and program issues for congressional staff and USDA decisionmakers; research the structure, conduct, and performance of selected markets for tobacco, grapes, sweet corn, snap beans, and corn sweeteners, and publish the results in bulletins and reports; revise and construct cost-of-production estimates for flue-cured and burley tobacco and sugarcane and sugarbeet production and processing; complete congressionally mandated studies related to specialty agriculture, including an economic analysis of the U.S. beekeeping industry and the fruit and vegetable industry; develop and improve the branch data base, electronic generation of data products for cabbage and onions, update situation and outlook tables and similar output, and report statistics for specialty agriculture crops and products; and develop a situation and outlook series for industrial products derived from agricultural crops.



Resources and Technology Division

The Resources and Technology Division (RTD) provides economic analyses of agricultural resource and technology issues. The division's integrated research, staff analysis, and situation and outlook activities assess the economic costs of agricultural production on the environment as well as the costs to agriculture of policies and programs seeking to mitigate environmental effects.

The division analyzes the effects of national and global developments, domestic and international policies and programs, and macroeconomic variables on the use and value of land, water, capital assets, and other agricultural resources, and assesses the possible effects of proposed or anticipated policy and program changes on agricultural production decisions. RTD studies the economics of environmental and health risk reduction, including the demand for risk reduction, appropriate production strategies for reducing risk, costs and benefits of policy alternatives, and the trade implications of environmental and food safety regulations.

RTD estimates supply, demand, and price relationships, substitutability and productivity of resources, including capital equipment, fertilizer, pesticides, energy, land, and water. The division evaluates public policies and programs that affect technology and productivity, the adoption and transfer of new technologies, the economic effects of regulat-

ing agricultural practices and inputs, and the economics of sustainable agricultural production systems. RTD also analyzes the environmental benefits and costs associated with agricultural activities, especially the effects on water quality.

In 1993, RTD will continue its involvement in USDA initiatives on food safety, water quality, and global climate change, and will participate in cross-division activities on trade and the environment and on food safety. Other high-priority issues to be addressed in 1993 include ethanol and biofuels, economic effects of implementation of the Endangered Species Act, and geographic information systems.

The 1993 program covers: comprehensive resource policy evaluations, including conservation programs and provisions, Western water policies and legislation, effects of chemicals and sediments on water quality, ethanol and biofuels options, and trade and environment interactions; economics of information, perceived environmental and health risk, and food safety, especially as it pertains to pesticides; economics of commodity policy reform and future environmental policy options; and nonmarket costs of environmental and natural resource effects of agricultural activities and implications for productivity and national accounting.

The 1993 program also covers: economic evaluation of landscape preservation, endangered species, and agricultural sustainability and biodiversity under alternative production systems; technology development, transfer, and adoption, including effects of agricultural research, critical environmental quality technologies, adaptation to global climate change, irrigation and water conservation, and sustainable production systems.

These areas of emphasis are supported by an ongoing program of research, staff analysis, and situation and outlook activities. The division will publish the latest information on land use and values, farm real estate taxes, foreign ownership, water availability and use, irrigation development, cropping

practices, soil conservation activities and program participation, and supply, demand, and prices of manufactured inputs, including fertilizer, pesticides, energy, and farm machinery in situation and outlook reports.

RTD has five branches: Environmental and Health Risk; Land and Global Resources; Productivity and Emerging Technologies; Resource Policy; and Water.

The **Environmental and Health Risk Branch** examines the economics of alternative policy options to reduce health and environmental risk. Agriculture and food production affect human health via food and water safety and quality. The occupational and environmental exposure of farmers, farmworkers, and rural residents is also important. The branch assesses the demand for human health and environmental quality as they relate to agriculture and food production and examines health-risk factors associated with farm production and marketing practices. Agriculture's adaptation to changes in policies at the local, State, Federal, and international levels, as well as to changes in consumer demands will be monitored.

In 1993, the branch will assess decisionmaking related to risk, including pesticides, products of biotechnology, and animal drugs, and assess firm or industry decisionmaking on agricultural production practices, inputs, and multiple sources of risks; estimate the demand for products produced under alternative production systems and with different environmental attributes; and communicate risk-related information, including material on food safety issues and health and environmental risks of chemicals. The branch will assess the benefits of using alternative pesticides and pest control strategies, and explain the adoption of risk-reducing production practices, technologies, and marketing practices.

The branch will also analyze aggregate and distributional effects of risk-reduction policies to enhance food safety and environmental quality, assess policy responses to production and product regulations, eco-

conomic incentives, information requirements, and liability rules, and perform economic analysis of risk management and risk-sharing policies.

Other branch goals are to analyze relationships between international trade and national requirements on health, safety, and technologies, and analyze the effect of trade harmonization proposals, including free trade agreements and trading blocs, on the environment, agriculture, and trade.

The Land and Global Resources Branch conducts an integrated research, staff analysis, and situation and outlook program that focuses on the longrun adjustment of resource use to changing policies, demographic and economic trends, and the quality and availability of resources. The particular focus is on changes in land resources and policy changes that affect land. The branch's research program evaluates such changes in terms of how resource adjustments affect the value and use of land and resources, the distribution of wealth as determined by land-ownership and resource changes, in terms of economic measures of welfare gains and losses, and in terms of effects on regional, national, and global agricultural production.

The branch also conducts research on global environmental change as it may affect the demand for U.S. agricultural resources, policy mechanisms used to internalize land and resource use externalities, and the distributional implications of agricultural and conservation policies.

In 1993, the branch will assess methods for estimating farm real estate values; develop a data base and make an economic evaluation of purchase of development rights programs; analyze resource allocation decisions and the distributional effects of policies leading to regional and aggregate shifts in resource use; examine the effect of global climate change on world agriculture; analyze land tenure, resource use, and farm asset data and report to Congress on foreign investment in U.S. agricultural land; and contribute to situation and

outlook reports on land values, cropland use, and machinery.

The **Productivity and Emerging Technologies Branch** conducts an integrated research, staff analysis, and situation and outlook program addressing the effects of technology on input use, intergenerational resource allocation, economics of sustainable production systems, factors affecting both individual and aggregate input productivity, public policies and programs that affect technology and productivity, and data development and publication. The branch plans to develop international comparisons of agricultural sector performance, construct productivity measures reflecting nonmarket environmental effects, and develop, summarize, report, and maintain survey data on sustainable farms and on agricultural chemical use, related practices, and production technologies.

The branch will also analyze factors affecting regional adoption of new technologies and assess the influence of technology adoption on the structure of agriculture, resource use and value, regional production shifts, farm profitability, sustainability, intergenerational resource allocation, input demand, and productivity. The branch also plans to assess the role of agricultural and environmental policies on invention, development, and adoption of new technologies, and sustainability.

In 1993, the branch will research domestic and international agricultural productivity; analyze research and development effects on agricultural input demand and technical change; examine the effectiveness of public and private research and development; analyze the effects of commodity, environmental, and other policies on sustainability of production systems; develop improved agricultural resource data bases, particularly on pesticides, fertilizer, and analysis of adoption and diffusion of alternative production practices in support of the water quality and food safety initiatives.

The **Resource Policy Branch** evaluates the relationships among agricultural, conservation, environmental, and technology policies,

and their economic implications. The branch analyzes national and international policy developments that affect U.S. agriculture and, ultimately, resource allocation, values and quality, and technological change. Study results support situation and outlook activities and the overall RTD and ERS research programs. The branch plays a key integrative role within RTD and across divisions because policy issues of interest often span multiple resource and technology areas.

The branch's work is broadly divided into four areas: resource and commodity policy, environmental policy evaluation, resources and international policy, and technology and economic policy. Branch research focuses on U.S. and international policies, as well as on other national and global developments that affect U.S. resource, technology, and environmental conditions related to agricultural activities. The four areas incorporate two distinct influences: (1) the effects of agricultural, macroeconomic, and trade policies on production decisions and their concomitant resource and technological consequences and (2) the effects of conservation and environmental policies on natural resource goals, and their corresponding implications for the agricultural economy. Policy studies encompass both direct resource management effects and indirect policy effects on resource use.

In 1993, four major research projects are planned. First, the joint management of agricultural commodity and conservation programs is a continuing area of inquiry. As we move toward the 1995 farm legislation and the development of new commodity and conservation titles, the broad range of economic and environmental effects and implied tradeoffs caused by program design and implementation will be evaluated. Second, evaluation of the development and implementation of water-quality policies under the President's Water Quality Initiative will be a major responsibility, as will analysis of the Endangered Species Act and the tradeoffs between wildlife and agriculture that it may imply.

Third, there is a rapidly growing array of global resource policy questions, including

climate change and the links between international agricultural trade and the environment. As the United States continues to forge open trade and investment agreements with other countries, the importance of viewing resource management in an open economy framework is crucial. Likewise, the growing national-level interests in environmental policy will have implications for trade and competitiveness of U.S. and other nations' agricultural commodities. Fourth, the branch will analyze the critical roles of technological development in both causing and solving agricultural resource management problems.

The **Water Branch** monitors and analyzes the demand for and supply of water, including producer response to drought, water supply adjustments, and related public policies, effects of water policies on irrigated agriculture and the rural and general economies, effects of environmental quality regulations on agriculture and the water-quality effects of agricultural policies and practices, adoption of conservation practices and their implications for water uses, and the environmental benefits and costs associated with agricultural activities. These activities cover shortrun and longrun conditions, trends, and responses to policies at national and regional levels.

In 1993, the branch will continue to develop and maintain national irrigation and water-use data; estimate regional water demand functions and assess the nature, extent, and consequences of competition for water supplies, particularly as they are reflected in the effects of the California drought; assess the economic effects of agricultural practices on water quality as they affect both the farm and the nonfarm economy; assess the physical and economic dimensions of surface and ground water contamination from animal wastes, fertilizers, and pesticides; and assess the effects of conservation, water-quality practices, and water-related endangered species restrictions on farm costs and returns, program costs, chemical and nutrient use, and pollution abatement.

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